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IMPROVED LACROSSE HEAD

Technical Field

The present invention relates to a head for a lacrosse stick having apparatus along the lip to protect the web laces from premature wearing and a ball retention apparatus along the sidewalls to help keep the ball in the pocket during play.

Background Art

Current lacrosse heads typically include an open frame with a base having a concave interior surface, a pair of sidewalls that diverge from the base, and a lip that interconnects the sidewalls remotely to the base. Openings or other means are formed through the frame for securing a lacrosse net around the back side of the frame, leaving the opposing front side for receiving lacrosse balls.

A frequent problem which occurs with lacrosse heads is the wearing of the laces. During play, the lip portion of the head comes in contact with the ground when scooping up the ball from the ground, causing the laces to wear out. U.S. Patent No. 4,358,117, issued November 9, 1982, to Deutsch, describes a lacrosse head which provides pairs of raised ridges along the outer surface of the lip. Each pair of raised ridges extends from opposed sides of circular shaped openings to accommodate the lacings and protect the lacings from abrasive contact with the ground. The lace holes disclosed in Deutsch are circular, which can cause

difficulty in stinging flat rectangular laces or produce a too loosely strung web. Additionally, Deutsch does not address the problem of lace wear resulting from contact of the inner surface of the lip with the lacrosse ball.

Another concern of lacrosse players is the facility of the lacrosse head to assist in retention of the ball therein, particularly when running or being checked. Frames of lacrosse sticks are commonly made of plastic to lighten the weight of the frame. Plastic frames can cause a loss of rigidity when it comes to ball retention. U. S. Patent No. 5,080,372 issued January 14, 1992, to Brine III et al, discloses a lacrosse stick head with a pair of elongated ribs disposed proximate the upper edges of the sidewalls and extending towards each other in a plane slightly overlying the ball pocket. Although these ribs are said to facilitate easier retention of a ball in the netting, projection of the ribs normal to the interior of the head does little to control the bounce of the ball into the pocket because of the very slight overlap of the ribs with respect to the pocket.

Additionally, since Brine III's ribs are continuous and extend along virtually the entire length of the sidewall, these lacrosse heads require extra material for the ribs, adding to the weight and cost of the lacrosse head. It is thus a problem to design a ball retention apparatus that is both light weight and cost effective and that does not compromise ball retention. It is desirable to configure a rib which will direct the ball towards the center of the pocket for better retention when the player is running or being

checked and also to place the ball in a better position for shooting the ball.

Summary Of The Invention

The present invention is directed to overcoming one or more of the problems as set forth above. It is an object of the present invention to provide an improved lacrosse head which provides protection for the lacings from wear due to contact with the ground and the ball while scooping the ball during play.

A further object of the present invention is to provide an improved lacrosse head which directs the ball toward the ball pocket into an immediate shooting position and to keep it there during play.

Another object of the present invention is to provide an improved lacrosse head with sidewalls having increased rigidity.

It is an object of the present invention to provide an improved lacrosse head with improved ball retention capabilities while decreasing the amount of material required to provide such capabilities.

Yet another object of the present invention is to provide an improved lacrosse head which provides a better fit for the laces.

According to the present invention, the foregoing and other objects are attained by providing an improved lacrosse head which protects the web laces from unnecessary wear and also helps keep the ball in the

pocket during play. The improved lacrosse head comprises an open frame having a base and a pair of sidewalls diverging from the base to form an interior surface. The interior surface of the sidewall includes a plurality of apertures along one side. A lip interconnects the sidewalls opposite the base and includes an exterior surface having a backlip portion and a frontlip portion. The backlip portion and frontlip portion in communication with the interior surface of the sidewall form the opening in the frame. The lip further comprises a plurality of apertures extending therethrough between the frontlip portion and the backlip portion. A plurality of laces are threadedly connected to the frame through the plurality of apertures on the interior surfaces of the sidewalls and the lip to form a pocket for receiving and carrying a ball.

One feature of the present invention is a pair of ridges formed on the lip portion and extending outwardly from the exterior surface of the lip to flank each lip aperture. The ridges are beveled in a decreasing dimension from the backlip portion to the frontlip portion. These ridges serve to protect the lacings from abrasive contact with the ground.

Another feature of the present invention is a plurality of depressions formed on the lip portion that extend inwardly from the interior surface of the lip. These depressions abut each aperture on the lip and are recessed in an increasing dimension from each aperture to the backlip portion. These depressions serve to protect the lacings from abrasive contact with the lacrosse ball.

An additional feature of the present invention includes a plurality of ball retaining ridges protruding from the interior surface of the sidewalls. Each ridge has an underside extending generally downwardly and outwardly toward the ball pocket and serves to direct and retain the ball within the pocket.

Brief Description Of The Drawings

FIGURE 1 is a perspective view of the improved lacrosse stick head in accordance with a preferred embodiment of the present invention;

FIGURE 2 is a side elevational view of the lacrosse head illustrated in Figure 1;

FIGURE 3 is a top plan view of the lacrosse head illustrated in Figures 1 and 2 and illustrating a ball in the pocket; and

FIGURE 4 is a sectional view of the lacrosse head taken substantially along line 4-4 in Figure 3.

Detailed Description of the Preferred Embodiments

Referring to FIGS. 1-4, there is shown a head for a lacrosse stick including the improvements of this invention. The head 20 preferably comprises an open frame 22 of monolithic injection molded plastic composition. The head may alternatively be formed from other methods besides injection molding and may also be formed of any other suitable material.

Frame 22 has a base 24 and a pair of sidewalls 26, 28 diverging from the base 24 to form an interior surface 30. The sidewalls 26, 28 are interconnected by an arcuate lip 32 at the ends thereof remote from the base 24. Sidewalls 26, 28 are of a diverging hourglass-like construction as shown in the plan view, being interiorly convex for about one-half of their lengths adjacent to lip 32. A series of apertures 34 is preferably disposed through each of the sidewalls 26, 28 along a backside thereof for securing a laced web thereto. Alternatively, the apertures 34 may be disposed entirely around frame 22. A socket 38 exteriorly projects from base 24 for receiving a lacrosse handle 40 (FIGS. 1-2 and 4). The handle 40 is preferably secured to the head 20 by a screw 42 (FIG. 4) or other suitable securing apparatus. A pair of ribs 44 integrally extend from associated sidewalls 26, 28 to the end of socket 38 remote from base 24 for strengthening the socket/frame interconnection.

The lip 32 includes a frontlip portion 46, a backlip portion 48, an interior lip surface 50, and an exterior lip surface 52. Lip 32 (FIG. 2) includes a plurality of ridges 54 extending outwardly from the exterior lip surface 52 to flank each one of the series of apertures 34 on the lip 32. The ridges 54 are beveled in a decreasing dimension from the backlip portion 48 to frontlip portion 46. These ridges 54 serve to protect the lacings of web 36 from abrasive contact with the ground which typically occurs while the head is being used to scoop up a ball. Preferably the apertures 34 along lip 32 are configured as quadrilaterals. This quadrilateral shape allows for better receipt

of the laces therethrough as the laces are also of a quadrilateral shape.

A web 36 for receiving and carrying a lacrosse ball therein is preferably formed by stringing strips of leather in two directions. A plurality of strips are strung through the apertures 34 in the base 24 and the apertures 34 in the lip 22. A plurality of separate strips are strung through the apertures 34 in one sidewall 26 across to the other sidewall 28. A pocket is thus formed. The strips are preferably formed of leather, but may be of any other suitable material. Such stringing of the web is well known in the art.

Additionally, the lip 32 preferably includes a plurality of depressions 56 formed in the interior lip surface 50. Each depression 56 abuts each aperture 34 on lip 32 and extends generally inwardly. The depressions 56 are recessed in an increasing dimension from each of the apertures 34 to the backlip portion 48 and act as a protection for the lacings of the web 36 from abrasive contact with the lacrosse ball 58 which can occur while running with a ball in the pocket or while scooping a ball up off the ground.

Each sidewall 26, 28 is provided with a plurality of ball retaining ridges 60 (FIGS. 1-4) protruding from the interior surface 30 of sidewalls 26, 28. The ridges 60 are preferably integrally formed with the inner surface 30 of the sidewalls 26, 28. Each of the ridges 60 preferably includes an underside 62 that extends downwardly and outwardly toward the ball pocket 64. The ridges 60 are configured in this manner to direct the ball 58 towards the center of pocket 64 (FIG.

3) for better retention when the player is running or being checked and also to place the ball 58 in a better position for shooting the ball.

As shown in the Figures, the ridges 60 are generally arcuate or curved in shape when viewed from the top and have peaks 70 and valleys 72. Because of the configuration of the ridges 60, the peaks 70 are able to extend further inwardly towards the pocket allowing more of the underside 62 of the ridge 60 to contact the ball and keep it in the pocket.

The present invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof; therefore, the illustrated embodiments should be considered in all respects as illustrative and not restrictive, reference being made to the appended claims rather than to the foregoing description to indicate the scope of the invention.